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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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CHRISTOPHER C. WINSLADE
MCANDREWS, HELD & MALLOY
500 W. MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER

HA, DAC V

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 05/13/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,584

Applicant(s)

AGAZZI ET AL.

Examiner

Dac V. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 61-118 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 61-118 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2, 4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 1, 61-76, 80-118** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56, respectively of U.S. Patent No. 6,304,598. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the patent 6,304,598 are the narrow version of that claimed in the instant application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 61, 65, 68, 70-72, 74-80, 82, 84, 90, 92, 103, 107, 108, 110-113, 117,** are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (US 4,805,215).

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Regarding claim 1, Miller teaches the followings.

“setting at least one tap threshold” (Col. 5, lines 45-50; Col. 6, lines 39-55);

“dynamically adjusting the at least one tap threshold to allow at least one tap to be activated or deactivated to converge an error to a prespecified acceptable target error” (Col. 6, lines 39-50; Col. 7, lines 10-34; Col. 4, lines 19-21; Col. 5, line 7 to Col. 6, line 11).

Regarding claim 61, Miller further teaches the claimed subject matter “wherein ... adjusted tap threshold” in Col. 7, lines 21-27.

Regarding claim 63, Miller further teaches the claimed subject matter “determining a filter error ... deactivating the tap” in Col. 7, lines 15-22.

Regarding claim 65, Miller further teaches the claimed subject matter “determining a system error ... deactivating the tap” in Col. 7, lines 15-22.

Regarding claim 68, Miller further teaches the claimed subject matter “wherein ... adjusted tap threshold” in Col. 7, lines 21-27.

Regarding claim 70, Miller implies that the claimed subject matter “wherein ... communication line” is known in the art in Col. 3, lines 3-10; Col. 4, lines 3-6.

Regarding claim 71, Miller teaches the claimed subject matter “wherein a select ... deactivation” in col. 7, lines 40-44.

Regarding claim 72, Miller teaches the claimed subject matter “further ... block-by-block basis” in col. 7, lines 14-15, 40-67.

Regarding claim 74, Miller teaches the claimed subject matter “wherein ... adaptive filter” in col. 1, lines 6-12, 25-31.

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Regarding claim 75, Miller teaches the claimed subject matter "wherein ... adaptive filter" in Col. 2, lines 39-46.

Regarding claim 76, Miller teaches the claimed subject matter "wherein ... adaptive filter" in Col. 2, lines 39-46.

Regarding claim 77, Miller further teaches the claimed subject matter "wherein ... target error" in Col. 7, lines 15-22.

Regarding claim 78, Miller further teaches the claimed subject matter "wherein ... target error" in Col. 7, lines 15-22.

Regarding claim 79, Miller further teaches the claimed subject matter "wherein ... error differential" in Col. 7, lines 15-22.

Regarding claim 80, see claim 63.

Regarding claim 82, see claim 68.

Regarding claim 84, Miller further implies the teaching of the claimed subject matter "wherein ... the same" in Col. 5, line 54 to Col. 6, line 5.

Regarding claim 90, see claim 80.

Regarding claim 92, see claim 82.

Regarding claim 103, see claim 80.

Regarding claim 107, see claim 71.

Regarding claim 108, see claim 70.

Regarding claims 110-112, see claims 74-76, respectively.

Regarding claim 113, see claim 103.

Regarding claim 117, see claim 107.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 62, 64, 66, 67, 69, 78-81, 83, 85-89, 91, 93-102, 104-106, 109, 114-116, 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller.

Regarding claims 62, 64, 66, 67, 69, 78, 79, these claimed subject matter would have been obvious to one skilled in the art as optional.

Regarding claims 81, 83, 85-89, these claimed subject matter would have been obvious to one skilled in the art as design specific.

Regarding claims 91, 93-98, these claimed subject matter would have been obvious to one skilled in the art as design specific.

Regarding claim 99, see claim 90 above. Further, based on the concept taught by Miller, many modifications could be done to bring the system to convergence. Therefore, the utilization of "a second system error" would have been optional to one skilled in the art.

Regarding claims 100, 101, these claimed subject matter would have been obvious to one skilled in the art as design specific.

Regarding claim 102, Miller further implies the teaching of the claimed subject matter "wherein ... adaptive filter" in Col. 5, line 54 to Col. 6, line 5.

Regarding claims 104-106, 109, these claimed subject matter would have been obvious to one skilled in the art as design specific.

Regarding claims 114-116, 118, see claims 104-106, 109.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stenstrom et al. (US 6,466,616) disclose Power Efficient Equalization.

Ikeda (US 5,636,151) discloses Adaptive Filter capable Of Removing A Residual Echo At A Rapid Speed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal line extending to the right.

Dac V. Ha
Examiner
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